

Patent Claims

1. A process for producing a discharge lamp, comprising the following process steps:

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a. providing a discharge vessel,

b. producing a paste for a functional layer from the following components:

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- pulverulent base material,
- polyalkylene carbonate as binder,
- solvent,

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c. forming the functional layer by applying the paste to at least part of the wall of the discharge vessel,

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d. if necessary, repeating steps b and c if more than one functional layer is intended.

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2. The process as claimed in claim 1, in which the pulverulent base material consists of a phosphor or phosphor mixture in order to form a phosphor layer (3) as functional layer.

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3. The process as claimed in claim 2, in which the phosphor or the phosphor mixture comprises one or more components selected from the group consisting of $\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}$, $\text{LaPO}_4:(\text{TB}, \text{Ce})$, $(\text{Gd}, \text{Y})\text{BO}_3:\text{Eu}$.

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4. The process as claimed in one of claims 1 to 3, in which the pulverulent base material consists of a reflective substance or reflective substance mixture, in order to form a reflective layer (4) as functional layer.

5. The process as claimed in claim 4, in which the reflective substance or the reflective substance mixture comprises Al_2O_3 and/or TiO_2 .

5 6. The process as claimed in one of the preceding claims, in which the pulverulent base material consists of a soldering glass or soldering glass mixture, in order to form a soldering glass layer (5) as functional layer.

10 7. The process as claimed in claim 6, in which the soldering glass or soldering glass mixture comprises Pb-B-Si-O .

15 8. The process as claimed in one of the preceding claims, in which the solvent comprises ethyl acetate.

9. The process as claimed in one of the preceding claims, in which the solvent comprises propylene glycol

20 diacetate.

10. The process as claimed in one of the preceding claims, in which the binder polyalkylene carbonate forms approx. 0.5 to 2% by weight, in particular 1 to

25 1.5% by weight.

11. The process as claimed in one of the preceding claims, in which the polyalkylene carbonate used as binder is polypropylene carbonate.

30 12. The process as claimed in one of the preceding claims, in which the paste is applied by spraying, dispensing or screen printing.

35 13. The process as claimed in one of the preceding claims, in which the discharge lamp is designed as a flat discharge lamp and the discharge vessel comprises two substantially planar plates (1, 2) which are joined to one another in a gastight manner.

14. The process as claimed in one of the preceding claims, in which the discharge lamp is designed for operation based on dielectric barrier discharges.